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El Salvador

BIOFUELS ANNUAL

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Report Highlights:
The current Government of El Salvador (GOES) is leaving the approval of the Ethanol Law to the new administration that takes office on June 1. Under this law, gasoline would be required to be mixed with sugarcane-derived ethanol on a 90%-10% ratio. This mixture does not affect normal gasoline engines avoiding the need for flex car engines. Currently there are several bio-fuel initiatives working in the country to produce bio-diesel from higuerillo (Ricinus communis) and tempate (Jatropha curcas) plants, and ethanol from imported dehydrated Brazilian alcohol to take advantage of a CAFTA-DR quota. However, the reduction in oil prices has decreased the interest in new sources of energy for the while.

Post:
San Salvador

Commodities:
select

Executive Summary:
The current GOES was not able to finish the approval process for the law to promote ethanol production from

sugarcane. The new administration (headed by President-elect Mauricios Funes who is affiliated with the Farabundo Marti Liberation Front - FMLN) taking office on June 1 will now have to complete this task. Under the proposed law, there would be a 90 % - 10 % fossil fuel -ethanol mix - a mixture that does not require gasoline engine modification. The GOES's main interest behind this legislation is to decrease the dependence on oil imports (which reached US$1.25 billion in 2008) and also to create much needed jobs in the rural sector.

El Salvador enjoyed a CAFTA-DR ethanol quota of 5.2 million gallons during the first year of the agreement and a 1.3 million gallon annual increase thereafter. CAFTA-DR requires that this ethanol be distilled in El Salvador but not necessarily from ethanol derived fromlocal sugarcane. Additionally, under CAFTA-DR, El Salvador enjoys unlimited access for ethanol produced with local raw materials. A U.S.-Brazilian-Salvadoran joint venture has constructed a US$10.5 million alcohol dehydration plant near the port of Acajutla with an annual 60 million gallon capacity. The plant started operations in 2005 and has started dehydrating Brazilian alcohol to re-export to the U.S. under CAFTA-DR.

El Salvador is also a pilot country for a U.S.-Brazil Bio-Fuels Initiative to develop alternative fuels in developing countries. In April 2008, the Inter-American Development Bank (IDB) provided approximately US$1.0 million to fund technical assistance to design the framework for this endeavor. Under this initiative, the U.S. Trade and Development Agency (USTDA) funded the pre-feasibility study for projects to support bio-fuel development which are expected to be completed on June 2009. Other studies backed by the Organization of American States (OAS), including one for technical assistance on blending and logistical aspects of implementing the ethanol mandate and another for local sugar mills to expand into ethanol production have been conducted. Brazil also funded an agronomic study on bio-fuels potential in El Salvador. Also the Getulio Vargas Foundation - a noted Brazilian Business School - is conducting a study on potential sugarcane production areas for ethanol and sugarcane varieties that are better for ethanol production.

However, it is too early to forecast how global ethanol developments will affect the social and economic environment of this country. So far, there is no clear indication of how new Salvadoran government will handle this new trend.

Author Defined:

BIO-FUELS POLICY

1. Domestic Policy Environment

a. Policies which support production and/or use of bio-fuels

There is currently no specific policy supporting production and/or use of bio-fuels. However, the GOES through the Ministry of Economy (MINEC) has developed a National Energy Policy. One of the general objectives of this policy is to reduce the country's vulnerability to energy shortages by diversifying energy sources including the production of bio-fuels. MINEC's Hydrocarbon Division is in charge of creating and approving policies for import, transportation, distribution and commercialization of hydrocarbons. An Energy Commission took over the energy policy on October 2008. Also, the Superintendency for Telecommunications (SIGET) is going to include energy under its legal framework. Currently, the Hydrocarbon Law that dates from 1981 regulates the exploration and exploitation; however there are no exploration activities in the country at this time. There are talks about having the Executive Electricity Commission (CEL) carry out a study to find out if there are offshore deposits of natural gas that can be exploited. The commercialization activities are based on the Regulatory Law for Deposit, Transportation and Distribution of Petroleum products that dates from 1970. Presently, there is only price regulation for Liquid Petroleum Gas (LPG), whose price is regulated because it is subject to a government subsidy.

The hydrocarbon diversification strategy is being developed in two fronts:

- utilization of alternative fuels through the establishment of a legal framework that permits the use of

LPG and Liquid Natural Gas (LNG) as automobile fuel;

- promotion and use of bio-fuels establishing the legal framework and the conditions that promote production and use of bio-diesel and ethanol, primarily using local or regional raw materials.

On the bio-fuels front, the GOES is working on legislation to promote sugarcane derived ethanol production, storage and sales. The law would mandate a 90%-10% gasoline-ethanol mix, a mixture that requires no gasoline engine modification. The Ministries of Agriculture and Economy have both worked on the legislation and have sent it to the Executive Branch for review and presentation to the National Assembly to be brought up for vote. However, it will be up to the new GOES administration which takes office on June 1 to seek legislative approval for this law. The residual waste referred to as "vinaza" is a constraint, and Colombia has offered assistance in using it as fertilizer due to its high potassium content.

b. Size of total motor vehicles petroleum based (gasoline and diesel) energy market

The size of the motor vehicle park is estimated at 600,000. El Salvador's petroleum imports are expected to reach US$800 million in 2009 at current oil prices. The breakdown of the fuel market in El Salvador is estimated to be 57 % diesel, 26 % regular gasoline, and 17 % premium gasoline for a total of 343.1 million gallons per year. There are 5 crude oil and refined product importers, including Venezuelan ALBA Petroleos and 373 service stations nationwide.

Demand for fuels has increased by approximately 3 percent in the first quarter of 2009 compared to same period in 2008.

Following are the fuel consumption numbers (gallons) for the first quarter of 2009:

Fuel Type	January	February	March	Quarterly Total
Premium	4,548,553	3,880,193	4,589,563	13,018,309
Regular	9,507,371	8,279,024	9,889,993	27,676,388
Diesel	17,042,329	15,715,785	18,414,683	51,172,707
Monthly Total	31,098,253	27,875,002	32,894,239	91,867,404

Source: Ministry of Economy

c. Bio-fuels production capacities, current/planned (including local vs. multinational ownership)

Current:

Two years ago the Ministries of Agriculture and Economy started a pilot program to promote the production of bio-fuels in which private university researchers participated. The program gave birth to the first bio-fuels plant that was financed by the Government of Finland using Racine oil derived from the higuerillo plant (Ricinus Communis) as the feedstock.

The other bio-fuels investment is a joint venture between Salvadoran and Guatemalan investors, with 35 % equity participation by the government-run Salvadoran Investment Corporation (CORSAIN). At a cost of US$2.5 million, this plant has been designed to produce bio-diesel from African palm imported from Honduras and Guatemala. Plant production capacity is 25,000 gallons per day (approximately 5% of current diesel consumption); however due to high

palm oil prices, this plant is searching for other sources of raw materials to be able to re-start production. Bio-diesel produced is being sold to public transportation consortia at a price similar to regular diesel. The main benefit of using bio-diesel is that it's biodegradable and it prolongs the life cycle of the engine.

There are two companies producing sugarcane-derived ethanol: La Cabaña sugar mill and a joint venture between CASSA (owners of Izalco and Chaparrastique sugar mills), Cargill and Brazilian Crystal that has been named American Renewable Fuel Suppliers (ARFS). The ARFS plant is a US$10.5 million investment with a capacity to produce 60 million gallons of ethanol annually. This plant started operations in September 2005 and is only dehydrating Brazilian alcohol to re-export to the U.S. market under CAFTA-DR. The La Cabaña plant has the capacity to produce 31,700 gallons per day from raw sugarcane or 15,850 gallons per day using molasses, a byproduct of sugar refining. Due to the absence of a law, these companies have to search for other markets for their product.

Planned:

As previously mentioned, El Salvador has been selected by the U.S.-Brazil Bio-Fuels Initiative to develop a pilot program for production of sugarcane based ethanol fuel in Latin America. Funding to establish the first ethanol plant estimated at US$20 million is still being negotiated with the IDB. The IDB has provided funding for consultants to develop a program strategy.

According to the Salvadoran Sugar Association, in order to produce 15 million gallons per year, which is the estimated need for a 10% ethanol mix, El Salvador would need 4 ethanol plants producing 31,700 gallons per day running for 120-150 days. These plants would require additional sugar cane as raw material. It is estimated that an additional 7,000 hectares of sugarcane would need to be planted, creating 4,000 new jobs. Currently, 72,000 hectares are under sugarcane cultivation. The Government of Colombia has provided technical assistance and a small biodiesel plant worth approximately US$250,000 that was handed over to the Ministry of Agriculture.

2. Import Regimes for Bio-Fuels (i.e. tariffs, quotas, other arrangements)

According to El Salvador's Customs Administration, ethanol is traded as "ethyl alcohol". There is no equivalent to the U.S. Harmonized Tariff Code (HTC) 9901.00.50, which defines ethyl alcohol or mixtures with ethyl alcohol to be used as fuel or in producing fuel. Instead, local Customs authorities only use the following HTC's:

2207.10 – Undenatured ethyl alcohol, of an alcoholic strength by volume of 80 percent vol. or higher.

2207.20.00 – Ethyl alcohol and other spirits, denatured, of any strength.

CIF duty of 5%.

3. Ethanol Trade, Bio-Diesel Trade, Corn Sweetener Trade

According to the Ministry of Agriculture (MAG), ethanol exports derived from imported raw materials (sugarcane) reached US$195.2 million in 2008. This product was exported to the U.S. market under the CAFTA-DR quota assigned to El Salvador for ethanol produced from imported raw materials and also to the Netherlands.

There are no records of ethanol imports.

4. Bio-fuels Impact on Traditional Uses such as Feed, Food, Trade

There is no impact foreseen on traditional uses such as feed, food or trade. Ethanol production is sugarcane based and there is ample idle land that can be devoted to fulfill the growth in sugarcane demand. Bio-diesel produced from palm oil, higuerillo (Ricinus communis) and tempate (Jatropha curcas) plants is not expected to cause any impact either. Palm oil is being imported from Honduras and Guatemala; higuerillo and tempate are being grown locally. The main impact on feed and food is due to the sudden hike in international yellow corn prices. El Salvador's poultry, cattle and swine industries depend on imports of yellow corn for animal feed mixes. Due to increasing international commodity prices, rising costs affecting the production of these products are been transferred to the consumer.

STATISTICAL INFORMATION

Quantity of Feedstock Use in biofuel Production in MT							
		2003	2004	2005	2006	2007	2008
Biodiesel							
	Palm Oil	NA	NA	NA	NA	100 %	0
Ethanol							
	Sugarcane	NA	NA	100 %	100 %	100 %	100 %

Biofuel Production/Consumption/Trade (Million Liters)						
	2003	2004	2005	2006	2007	2008
Biodiesel/Ethanol						
Beginning stocks	0	0	0	NA	NA	NA
Production	0	0	0	NA	NA	NA
Imports	0	0	0	285	245	358
Total supply	0	0	0	NA	NA	NA
Exports	0	0	0	282	226	300
Consumption	0	0	0	NA	NA	NA
Ending stocks	0	0	0	NA	NA	NA

Export Trade Matrix El Salvador Ethanol			
Time Period	**CY**	**Units:**	**Million Liters**
Exports for:	**2007**		**2008**
U.S.	226	U.S.	270
Others		**Others**	
		Netherlands	30

Total for Others	0		30
Others not Listed	0		0
Grand Total	226		300

Import Trade Matrix

El Salvador

Ethanol

Time Period	CY	Units:	Million Liters
Imports for:	**2007**		**2008**
U.S.	0	U.S.	0
Others		**Others**	
Brazil	234	Brazil	317
Guatemala	10	Guatemala	34
		Nicaragua	4
Total for Others			
Others not Listed	1		3
Grand Total	245		358